STATE OF NEW HAMPSHIRE
INTER-DEPARTMENT COMMUNICATION

DATE: March 2, 2016

FROM: Matt Urban
Wetlands Program Manager

AT (OFFICE): Department of Transportation
Bureau of Environment

SUBJECT Dredge & Fill Application
Hampton Falls, 40502

TO Gino Infascelli, Public Works Permitting Officer
New Hampshire Wetlands Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

Forwarded herewith is the application package prepared by NH DOT Bureau of Bridge Maintenance for the subject Major impact project. This project is classified as Major per Env-Wt 303.02(p). The project is located on NH Route 84 over the Hampton Falls River in the Town of Hampton Falls. The existing structure is a metal pipe arch bridge that is 10'-3" wide and 6'-9" tall. The proposed work consists of replacing the metal pipe with a 12'x8' concrete box, and placing riprap.

The project was reviewed at the Natural Resource Agency Coordination Meeting on August 19, 2015. The minutes from that meeting can be viewed on the Department's website via the following link: http://www.nh.gov/dot/org/projectdevelopment/environment/units/project-management/nracrmeetings.htm

NHDOT and NHDES met to discuss mitigation for this project on February 9th. The minutes from that meeting can be found within this application package. The Department has subsequently reduced the amount of rip-rap at the inlet of outlet of the structure as much as possible, while still protecting the structure, in an effort to minimize impacts and reduce the required mitigation. Based on the agreed upon areas to measure for mitigation the Department has determined that mitigation will be in the amount of $13,200.

As a result of changing impacts prior to submission of this application two payment voucher have been processed for this application. The first voucher, (Voucher #423218) is in the amount of $397.80. The second voucher, (Voucher#430649) is in the amount of $640.20. The combined total fulfilling the required application fee is $1,038.00.

The lead people to contact for this project are Steve Johnson, Assistant Administrator, Bureau of Bridge Maintenance (271-3668 or sjohnson@dot.state.nh.us) or Matt Urban, Wetlands Program Manager, Bureau of Environment (271-3226 or murban@dot.state.nh.us). If and when this application meets with the approval of the Bureau, please send the permit directly to Matt Urban, Wetlands Program Manager, Bureau of Environment.

MRU:mru
Enclosures
cc:
BOE Original
Town of Hampton Falls (4 copies via certified mail)
Carol Henderson, NH Fish & Game
Edna Feighner, NH Division of Historic Resources (NHDOT Cultural Review within)
Maria Tur, US Fish & Wildlife
Mark Kern, US Environmental Protection Agency
Michael Hicks , US Army Corp of Engineers

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THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF ENVIRONMENTAL SERVICES
LAND RESOURCES MANAGEMENT
WETLANDS BUREAU
29 Hazen Drive, PO Box 95, Concord, NH 03302-0095
Phone: (603) 271-2147 Fax: (603) 271-6588
http://des.nh.gov/organization/divisions/water/wetlands

PERMIT APPLICATION

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

1. REVIEW TIME:
Indicate your Review Time below. Refer to Guidance Document A for instructions.

☒ Standard Review (Minimum, Minor or Major Impact) ☐ Expedited Review (Minimum Impact)

2. PROJECT LOCATION:
Separate applications must be filed with each municipality that jurisdictional impacts will occur in.

ADDRESS: **NH Rte. 84 over Hampton Falls River** TOWN/CITY: **Hampton Falls**

TAX MAP: BLOCK: LOT: UNIT:

USGS TOPO MAP WATERBODY NAME: **Hampton Falls River** ☐ NA STREAM WATERSHED SIZE: **5.48 mi2** ☐ NA

LOCATION COORDINATES (If known): **042`54'34.41" 070`52'56.82"** ☒ Latitude/Longitude
☐ UTM ☐ State Plane

3. PROJECT DESCRIPTION:
Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

Replace the bridge that carries NH Rte. 84 over the Hampton Falls River (162/044). The existing structure is a metal pipe arch bridge that is 10'-3" wide and 6'-9" tall. Proposed work consists of replacing the metal pipe with a 12'x8' concrete box, and placing riprap.

4. RELATED PERMITS, ENFORCEMENT, EMERGENCY AUTHORIZATION, SHORELAND, ALTERATION OF TERRAIN, ETC...

5. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:
See the Instructions & Required Attachments document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: NHB **15** - **3799** .

b. ☐ Designated River the project is in ¼ miles of: _____ ; and
date a copy of the application was sent to Local River Advisory Committee: Month: __ Day: __ Year: ____
☒ NA

6. APPLICANT INFORMATION (Desired permit holder)

LAST NAME, FIRST NAME, M.I.: **Johnson, Steve W**			
TRUST / COMPANY NAME: **NH Dept. of Transportation**	MAILING ADDRESS: **7 Hazen Drive**		
TOWN/CITY: **Concord**		STATE: **NH**	ZIP CODE: **03302**
EMAIL or FAX: **sjohnson@dot.state.nh.us**	PHONE: **603 271 3226**		
ELECTRONIC COMMUNICATION: By initialing here: SWJ, I hereby authorize DES to communicate all matters relative to this application electronically			

7. PROPERTY OWNER INFORMATION (If different than applicant)

LAST NAME, FIRST NAME, M.I.:			
TRUST / COMPANY NAME:	MAILING ADDRESS:		
TOWN/CITY:		STATE:	ZIP CODE:
EMAIL or FAX:	PHONE:		
ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize DES to communicate all matters relative to this application electronically			

8. AUTHORIZED AGENT INFORMATION

LAST NAME, FIRST NAME, M.I.: **Weatherbee, Anthony N**	COMPANY NAME: **NH Dept. of Transportation**		
MAILING ADDRESS: **7 Hazen Drive**			
TOWN/CITY: **Concord**		STATE: **NH**	ZIP CODE: **03302**
EMAIL or FAX: **aweatherbee@dot.state.nh.us**	PHONE: **603-271-3667**		
ELECTRONIC COMMUNICATION: By initialing here ANW, I hereby authorize DES to communicate all matters relative to this application electronically			

9. PROPERTY OWNER SIGNATURE:

See the Instructions & Required Attachments document for clarification of the below statements

By signing the application, I am certifying that:

1. I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.
2. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document.
3. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.
4. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.
5. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.
6. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47.
7. I have submitted a copy of the application materials to the NH State Historic Preservation Officer.
8. I authorize DES and the municipal conservation commission to inspect the site of the proposed project.
9. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.
10. I understand that the willful submission of falsified or misrepresented information to the New Hampshire Department of Environmental Services is a criminal act, which may result in legal action.
11. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.
12. The mailing addresses I have provided are up to date and appropriate for receipt of DES correspondence. DES will not forward returned mail.

Property Owner Signature	Print name legibly	Date
Steve W Johnson	STEVE W JOHNSON	1/6/2016

MUNICIPAL SIGNATURES

10. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

⇨ Authorized Commission Signature	Print name legibly	Date

DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.
2. The Conservation Commission signature should be obtained prior to the submittal of the original application and four copies to the town/city clerk for mailing to the DES.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will reviewed in the standard review time frame.

11. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 1991), I hereby certify that the applicant has filed five application forms, five detailed plans, and five USGS location maps with the town/city indicated below and I have received and retained certified postal receipts (or copies) for all abutters identified by the applicant.

⇨ Town/City Clerk Signature	Print name legibly	Town/City	Date

DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I(d):

1. For applications where "Expedited Review" is checked on page 1, accept the application for mailing only if the Conservation Commission signature has been sought;
2. Collect the postal receipts demonstrating that all abutters and the Local Advisory Committee were sent proper notice;
3. Collect any administrative fees, not to exceed $10 plus the cost of postage by certified mail (RSA 482-A:3,I).
4. IMMEDIATELY sign the original application and four copies in the signature space provided above;
5. Retain one copy of the application form, one complete set of attachments and the postal receipts demonstrating that all abutters and the Local River Advisory Committee were notified and make them reasonably accessible to the public;
6. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board in accordance with RSA 482-A:3, I; and
7. IMMEDIATELY send the ORIGINAL application form, one complete set of attachments and filing fee, by CERTIFIED MAIL to the NHDES Wetlands Bureau at the address indicated on page 1 of this application. (DO NOT HOLD FOR CONSERVATION COMMISSION SIGNATURE).

12. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact

Permanent: impacts that will remain after the project is complete.

Temporary: impacts not intended to remain (and will be restored to pre-construction conditions) after the project is complete.

After-the-fact (ATF): work completed prior to receipt of this application by DES. Check box to indicate ATF.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.		TEMPORARY Sq. Ft. / Lin. Ft.	
Forested wetland		☐ ATF		☐ ATF
Scrub-shrub wetland		☐ ATF		☐ ATF
Emergent wetland		☐ ATF		☐ ATF
Wet meadow		☐ ATF		☐ ATF
Intermittent stream		☐ ATF		☐ ATF
Perennial Stream / River	339 / 99	☐ ATF	1,649 / 72	☐ ATF
Lake / Pond	/	☐ ATF	/	☐ ATF
Bank - Intermittent stream	/	☐ ATF	/	☐ ATF
Bank - Perennial stream / River	/	☐ ATF	/	☐ ATF
Bank - Lake / Pond	/	☐ ATF	/	☐ ATF
Tidal water	/	☐ ATF	/	☐ ATF
Salt marsh		☐ ATF		☐ ATF
Sand dune		☐ ATF		☐ ATF
Prime wetland	137	☐ ATF	1,110	☐ ATF
Prime wetland buffer		☐ ATF	1,955	☐ ATF
Undeveloped Tidal Buffer Zone (TBZ)		☐ ATF		☐ ATF
Previously-developed upland in TBZ		☐ ATF		☐ ATF
Docking - Lake / Pond		☐ ATF		☐ ATF
Docking - River		☐ ATF		☐ ATF
Docking - Tidal Water		☐ ATF		☐ ATF
TOTAL	476 / 99		4,714 / 72	

13. APPLICATION FEE: See the Instructions & Required Attachments document for further instruction

☐ Minimum Impact Fee: Flat fee of $ 200

☒ Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking) **5,190** sq. ft. X $0.20 = $ **1,038.00**

Temporary (seasonal) docking structure: _____ sq. ft. X $1.00 = $ _____

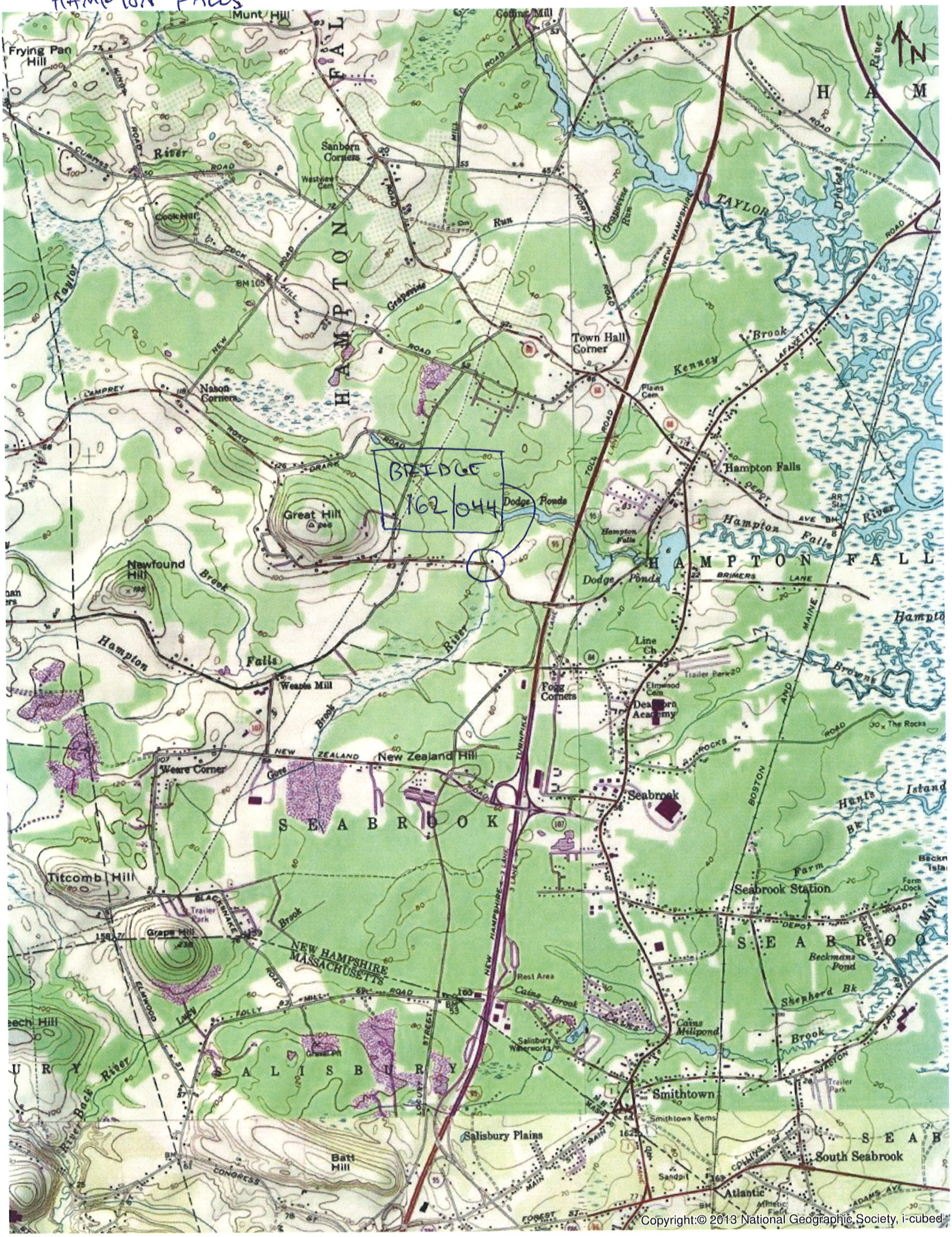
Permanent docking structure: _____ sq. ft. X $2.00 = $ _____

Projects proposing shoreline structures (including docks) add $200 = $ _____

Total = $ _____

The Application Fee is the above calculated Total or $200, whichever is greater = $ **1,038.00**

HAMPTON FALLS



CONSTRUCTION SEQUENCE

1. Sandbags and silt booms will be placed as necessary to prevent silt from leaving the work zone. A temporary bypass pipe will be installed and stream flow will be maintained in a temporary pipe.
2. Half of the existing structure will be removed.
3. A precast concrete box will be placed and concrete wingwalls will be constructed. Riprap will be placed and buried in front of the new structure.
4. All final remaining portions of the existing structure will be removed.
5. The final portion of the concrete box will be installed.
6. The wildlife shelf and natural bottom will be constructed inside the box.
7. The river will be diverted into the new concrete box.
8. The temporary pipe will be removed.
9. All dewatering devices will be removed and the site will be restored.

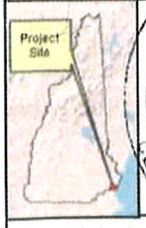
Note:

Project will use and maintain DES Best Management Practices at all stages of construction.

Attachment A. Delineation Plan

NHDOT Wetland and Stream Delineation

NH Route 84 (Kensington Rd.) Over Hampton Falls River, Hampton Falls, NH



Top-of-Bank
Wetland Boundary
Scoured Channel
Roads
Invasive Plant
ACOE Data Plot

Data Sources: NH GRANIT, NWI, FBE
Coordinate System: NH State Plane
Map created by FB Environmental, 2013

0 20 40 60
Feet

Notes: Wetlands were delineated in accordance with the 1987 US Army Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, v2.0. January 2012.

SUMMARY REPORT- HAMPTON FALLS, NH

General Site Description

The Hampton Falls site is located on NH Route 84 (Kensington Road) over the Hampton Falls River, in Hampton Falls, NH. The survey area includes lands located 50 feet upstream and downstream, and 50 feet along each roadway approach, a distance of 50 feet from the roadway centerline on Kensington Road. The Hampton Falls River is a tributary of the Hampton River, which flows into Hampton Harbor.

The environs surrounding the site include residential property to the north and undeveloped land to the south. Wetland and stream assessments were conducted on November 19-20, 2013. Chocorua Mucky Peat is the dominant soil type within the survey area, with Squamscott fine sandy loam along the western edge of the survey area (Attachment B). These soils are classified as very poorly drained and poorly drained, respectively.

Wetland Type /Classification and Stream Delineation

NWI maps indicate the presence of a permanently flooded riverine lower perennial wetland system with an unconsolidated bottom (R2UBH) just north of the survey area. The wetland system present at the southern portion of the survey area is classified by the NWI as a seasonally flooded palustrine needle leaved evergreen/broad-leaved deciduous and broad-leaved deciduous wetland system (PFO4/1E, PFO1E). Field observations indicate that the system is now a PFO5E as the trees are dead due to permanent inundation. Conversations with an abutting landowner indicated that beaver activity has raised water levels.

Observed dominant wetland vegetation consisted of red maple (*Acer rubrum*) in the tree and shrub layers, and sedges (*Carex sp.*) in the herb layer. Soil within the wetland met the requirements for depleted below dark surface (A11), as the profile contained an 8"+ layer containing a gleyed matrix. The observed primary wetland hydrology indicator consisted of saturated soil (Attachment F).

Top of bank was flagged along the portion of the Hampton Falls River within the survey area. The top of bank flags also serve to demarcate the ordinary high water line. Wetland boundaries were flagged along the edge of the river south of the culvert. In addition, a scoured channel was documented running parallel to the south side of Kensington Road. Note that the upland wetland determination plot is located outside of the survey area, as there were not suitable locations within it.

Extent of Invasive Species

Large patches of common reed (*Phragmites australis*) were observed within and beyond the portion of the survey area south of Kensington Road. Several Morrow's honeysuckle (*Lonicera morrowii*) and purple loosestrife plants (*Lythrum salicaria*) were also observed at the south side of Kensington Road.

Natural Heritage Review

A query of the Natural Heritage Bureau (NHB) on-line database produced a negative result, indicating that there are currently no recorded occurrences for sensitive species or exemplary natural communities within the survey area (Attachment E).

Type and Extent of Rare Plants/Natural Communities

No rare plants or exemplary natural communities were observed within or in the vicinity of the survey area.

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http://des.nh.gov/organization/divisions/water/wetlands/index.htm
Permit Application Status: http://des.nh.gov/onestop/index.htm

PERMIT APPLICATION – ATTACHMENT A
MINOR & MAJOR 20 QUESTIONS

Env-Wt 302.04 Requirements for Application Evaluation – For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project's design in assessing the impact of the proposed project to areas and environments under the department's jurisdiction. Respond with statements demonstrating:

1. The need for the proposed impact.

The existing metal pipe is on the state redlist due to the pipe exhibiting heavy deterioration. The metal pipe is holed for 6 feet in length at the southeast and southwest ends. There is heavy rust and scale to the lower half of the invert with 25% section loss under traffic and 50% section loss at the south (inlet) end. The metal pipe is too far deteriorated to install a concrete invert so the entire structure must be replaced with a new structure. It is necessary to impact jurisdictional areas to provide for the replacement structure, its surrounding riprap, and for temporary construction access. If the structure is not replaced, the road will eventually be closed.

2. That the alternative proposed by the applicant is the one with the least impact to the wetlands or surface waters on site.

Install concrete invert: Although this is the typical repair used to fix metal culverts, the existing metal pipe is too far deteriorated to adequately be repaired by a concrete invert.

Replace the structure with a fully environmentally compliant structure: The required span based on the NH Stream Crossing Guidelines for a new crossing is 26'-3" and the span being proposed is 12'-0". Installing a structure with a 26'-3" span would cost approximately $1,000,000 and the cost for the proposed structure is approximately $250,000. The additional costs are incurred because a 26'-3" span requires a different and more expensive type of bridge to be constructed and require a pile supported substructure. Constructing a larger structure would increase the square footage of wetland impacts. It is not practicable to spend the additional resources on a larger structure when a smaller structure can be installed for approximately half of the cost.

Replace structure with a 12'x8' box: This is the proposed design. The structure will have a 1'-0" natural bottom to facilitate aquatic passage and a shelf will be constructed inside the box to facilitate small critter passage. This structure has a larger span and rise than the existing metal pipe. These improvements will help to mitigate the permanent impacts of the project. This is the most cost effective structure to install at this location while maintaining a low environmental impact.

3. The type and classification of the wetlands involved.

R2UB2H: Riverine, lower perennial, unconsolidated bottom, sand, permanently flooded

4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.

Hampton Falls River flows into Hampton River.

5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.

Hampton Falls River has not been identified as a rare surface water of the state.

6. The surface area of the wetlands that will be impacted.

R2UB2H – 339 SF Perm 1,649 SF Temp
Prime Wetland Buffer – 1955 SF Temp
Prime Wetland – 137 SF Perm 1,110 SF Temp

7. The impact on plants, fish, and wildlife, but not limited to:
   a. Rare, special concern species;
   b. State and federally listed threatened and endangered species;
   c. Species at the extremities of their ranges;
   d. Migratory fish and wildlife;
   e. Exemplary natural communities identified by the DRED-NHB; and
   f. Vernal pools.

a. No rare or special concern species were identified within the proposed project area.

b. There were no State or Federally listed threatened or endangered species identified within the project limits via the NHB search. However, the USF&WS IPaC search identified the Northern Long-Eared Bat (NLEB) on the Project's Official Species List as having potential to be present in the project area. This project does require tree clearing. The Department has determined that the project will not result in any prohibited take as described in the final 4(d) rule that will be effective February 16th. The Department intends to employ the optional framework to streamline section 7 consultation in accordance with the USFWS non-jeopardy Intra-Service Programmatic Biological Opinion on their action of issuing the 4(d) rule for the NLEB, provided that ACOE elects to adopt this process.

As an added avoidance and minimization measure, the Bureau of Bridge Maintenance will be completing a Bridge Inspection Form no more than 7 days prior to commencing construction. If any signs of bat utilization are observed during the bridge inspection, work will not commence until coordination with USFWS and NHDOT Bureau of Environment has been completed.

c. There are no species known to be at the extremities of their ranges located in the project area.

d. This project will take place outside of fish spawning season; therefore migratory fish and other aquatic life will not be impacted during construction. The box will have a 1'-0" natural bottom installed. A wildlife shelf will be constructed inside the box that will facilitate wildlife crossing through the structure. This is an improvement over the existing condition as there is currently no way for critters to cross through the existing structure.

e. The Department has coordinated with DRED and the results of the NHB review revealed no records in this area.

f. There were no vernal pools identified and/or delineated in the project area.

8. The impact of the proposed project on public commerce, navigation and recreation.

During construction, access to the nearby residents and/or commercial businesses will be maintained at all times by alternating traffic with a one lane closure. Hampton Falls River is non-navigable water which makes it non-conducive to boaters. Fishing and snowmobiling are the only recreation identified in the project area. During construction fishing activities from the banks of the brook will need to occur outside of the construction work zone. The width and grade of the snowmobile trail over the existing metal pipe will be maintained so snowmobiling will not be affected by a new structure. When construction is completed, the project as proposed will be a benefit to the public commerce.

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

The project will not significantly interfere with the aesthetic interests of the general public. The proposed concrete box structure will be more pleasing to the eye than the existing rusted metal pipe.

10. The extent to which a project interferes with or obstructs public rights of passage or access. For example, where the applicant proposes to construct a dock in a narrow channel, the applicant shall be required to document the extent to

which the dock would block or interfere with the passage through this area.

The project will not interfere with or obstruct public rights of passage or access. During construction one lane of alternating traffic will be maintained at all times. This will ensure access to all nearby businesses and residential homes in this area. If needed, detour signs can be placed to redirect oversized loads. Upon completion of this project the bridge will be reopened to two way traffic as it was prior to construction.

11. The impact upon the abutting pursuant to RSA 482-A:11, II. For example, if an applicant is proposing to riprap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.

The project is expected to have a positive impact on abutting properties. The new structure will better serve the abutting properties if they need to travel on the road and reduce the risk of flooding. The riprap that is being installed will prevent a washout of the structure which will better protect abutting properties.

The project as proposed will not alter the chance of flooding on abutting properties.

12. The benefit of a project to the health, safety, and well-being of the general public.

The project will provide a safer, longer lasting structure and roadway. If the structure is not replaced, the bridge will eventually be load posted or closed. Keeping the roadway open benefits commerce, trade, emergency access, etc, for the general public.

13. The impact of a proposed project on quantity or quality of surface and ground water. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and difference in the quality of water entering and exiting the site.

The proposed project does not create any additional surface water runoff and stormwater discharge locations will remain unchanged. Best Management Practices will be used to prevent any adverse effect to water quality during construction.

14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.

Flooding: Replacing the existing metal pipe culvert with a 12' x 8' concrete box will improve the crossing's ability to handle flooding due to the larger opening. High flows will not be restricted, and low flows will be maintained as a result of this project. The proposed box will pass the 100 year flood event.

Erosion: The riprap placed at the inlet and outlet of the structure will prevent erosion and preserve the natural alignment and gradient of the stream channel. The inlet and outlet of the box will be installed at the same elevations as the stream bottom to ensure the existing gradient is preserved and thus prevent creation of a scour hole at the outlet.

Sedimentation: Nothing that will be a barrier to sediment transport will be installed in this project.

15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.

Surface waters will not be reflected or redirected as a result of this project. Hampton Falls River does not have enough surface water for wave energy to be an issue.

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alternations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage ownership of that wetland and the percentage of that ownership that would be impacted.

There are no similar structures in the vicinity.

17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.

The value of the wetland as a habitat for living organisms will be enhanced by this project by installing a structure with a longer span and rise. The 18" wildlife shelf will allow small critters to utilize the crossing without being forced to cross the road. A function of Hampton Falls River is to carry water from a higher elevation to a lower elevation. Installing a new structure will preserve the crossing's ability to carry water downstream without obstruction.

18. The impact upon the value of the sites included in the latest published edition of the National Register of Natural Landmarks, or sites eligible for such publication.

This project is not located in or near any Natural Landmarks listed on the National Register.

19. The impact upon the value of areas named in acts of congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.

There are no areas named in acts of congress or presidential proclamations as national rivers, national wildness areas, or national lakeshores that will be impacted as a result of this project.

20. The degree to which a project redirects water from one watershed to another.

The project as proposed will not redirect water from one watershed to another.

Additional comments

New Hampshire DOT
Department of Transportation

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGE MAINTENANCE
7 Hazen Drive, PO Box 483, Concord, NH 03302-0095
Phone: (603) 271-3667 Fax: (603) 271-1588

WETLANDS PERMIT APPLICATION – ATTACHMENT C
Stream Crossing Requirements & Information

Env-Wt 904.09(a) – If the applicant believes that installing the structure specified in the applicable rule is not practicable then the applicant may propose an alternative design in accordance with this section.
1. Please explain why the structure specified in the applicable rule is not practicable (Env-Wt 101.69 defines practicable as "*available and capable of being done after taking into consideration costs, existing technology, and logistics in light of overall project purposes*") *(question 2, Attachment A, Minor and Major 20 Questions)*;
Hampton Falls River has a drainage area of 5.48 square miles which qualifies this stream as a Tier 3 Crossing. The required span based on a Stream Crossing Assessment done by the Bureau of Environment is 26'-3". Installing a structure with an 26'-3" span would cost approximately $1,000,000 and the cost for the proposed structure is approximately $250,000. The additional costs are incurred because a 26'-3" span requires larger and more expensive equipment, pile driving and more construction materials to be purchased and more work hours spent constructing a larger structure.
2. Please explain how the proposed alternative meets the specific design criteria for Tier 2 and Tier 3 crossings to the *maximum extent practicable*. Env-Wt 904.05 Design Criteria for Tier 2 and Tier 3 Stream Crossings – New Tier 2 stream crossings, replacement Tier 2 crossings that do not meet the requirements of Env-Wt 904.07, and new and replacement Tier 3 crossings shall be designed and constructed…
…In accordance with the NH Stream Crossing Guidelines:
The structure will have 1'-0" of natural bottom to facilitate fish passage. A shelf will be constructed inside the box to facilitate small critter passage. This structure has a larger span and rise than the existing metal pipe. These improvements will help to mitigate the permanent impacts of the project. This is the most cost effective structure to install at this location while maintaining a low environmental impact. It is not practicable to accommodate the full span as proposed by the NH Stream Crossing Guidelines because of equipment and funding constraints. **The proposed structure will match the existing slope and alignment.** **The existing structure is a closed structure and the proposed box is also.** **There will be 1'-0" of natural embedment in the proposed structure.** **Wildlife passage through the proposed structure will be improved over the existing structure because of the wildlife shelf.** **The proposed structure will maintain the flow depths found in the existing structure.** **The proposed structure is expected to be able to pass the 100 year flood event.**
…With bed forms and streambed characteristics necessary to cause water depths and velocities within the crossing structure at a variety of flows to be comparable to those found in the natural channel upstream and downstream of the stream crossing:
Water depths and velocities within the crossing at a variety of flows will be comparable to the existing depths and velocities. These flows are comparable to those found in the natural channel upstream and downstream of the stream crossing.
…To provide a vegetated bank on both sides of the watercourse to allow for wildlife passage:
It is not possible to provide vegetated banks on both sides of the watercourse below the roadway, regardless of

the type of structure installed. The wildlife shelf will have a smooth top and will function as a bank to allow for wildlife passage.
...To preserve the natural alignment and gradient of the stream channel, so as to accommodate natural flow regimes and the function of the natural floodplain *(questions 14 and 15, Attachment A, Minor and Major 20 Questions)*;
Replacing the existing metal pipe culvert with a 12' x 8' concrete box will improve the crossing's ability to handle flooding due to the larger opening. High flows will not be restricted, and low flows will be maintained as a result of this project. The proposed box is expected to pass the 100 year flood event.
...To accommodate the 100-year frequency flood and to ensure that there is no increase in flood stages on abutting properties *(questions 11 and 14, Attachment A, Minor and Major 20 Questions)*:
The project is expected to have a positive impact on abutting properties. The new structure will better serve the abutting properties if they need to travel on the road. The riprap that is being installed will prevent a washout of the structure which will better protect abutting properties. **The project as proposed will not alter the chance of flooding on abutting properties.** **The proposed box is expected to pass the 100 year flood event.**
...To simulate a natural stream channel:
1'-0" of natural embedment in the box and burying the riprap at the inlet and outlet will better simulate a natural stream channel. The wildlife shelf will simulate the bank of a natural stream channel.
...So as not to alter sediment transport competence *(question 14, Attachment A, Minor and Major 20 Questions)*:
Nothing that will alter sediment transport will be installed in this project.
Env-Wt 904.09(c)(3) – The alternative design must meet the general design criteria specified in Env-Wt 904.01:
(a) Not be a barrier to sediment transport *(question 14, Attachment A, Minor and Major 20 Questions)*;
Nothing that will be a barrier to sediment transport will be installed in this project.
(b) Prevent the restriction of high flows and maintain existing low flows *(question 14, Attachment A, Minor and Major 20 Questions)*;
Replacing the existing metal pipe culvert with a 12' x 8' concrete box will improve the crossing's ability to handle flooding due to the larger opening. High flows will not be restricted, and low flows will be maintained as a result of this project. The proposed box is expected to pass the 100 year flood event.
(c) Not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to the water body beyond the actual duration of construction *(question 7, Attachment A, Minor and Major 20 Questions)*;
The proposed structure will more adequately facilitate movement of aquatic life due to the wildlife shelf and natural bottom. This project will take place in the summer and not during fish spawning season; therefore, migratory fish and other aquatic life will not be impacted during construction.
(d) Not cause an increase in the frequency of flooding or overtopping of banks *(question 14, Attachment A, Minor and Major 20 Questions)*;

Replacing the existing metal pipe culvert with a 12' x 8' concrete box will improve the crossing's ability to handle flooding due to the larger opening. High flows will not be restricted, and low flows will be maintained as a result of this project. The existing crossing has no history of flooding or overtopping of the banks of the stream. The proposed box is expected to pass the 100 year flood event.
(e) Preserve watercourse connectivity where it currently exists *(question 15, Attachment A, Minor and Major 20 Questions)*;
Connectivity will remain unchanged with the proposed structure and will not be worsened.
(f) Restore watercourse connectivity where...
...connectivity previously was disrupted as a result of human activity(ies) *(question 15, Attachment A, Minor and Major 20 Questions)*;
Connectivity will improved by increasing the span of the crossing and by shortening the overall structure length.
...restoration of connectivity will benefit aquatic life upstream or downstream of the crossing *(question 15, Attachment A, Minor and Major 20 Questions)*;
Aquatic life upstream and downstream will not be affected as a result of this project.
(g) Not cause erosion, aggradation, or scouring upstream or downstream of the crossing *(question 14, Attachment A, Minor and Major 20 Questions)*;
The riprap placed upstream and downstream of the structure will prevent erosion and scour and will preserve the natural alignment and gradient of the stream channel. The inlet of the proposed box will be installed at the same elevation as the existing pipe. The outlet will match the existing stream bottom to ensure the existing gradient will be preserved. Flow through the structure is not changing so aggradation will not occur.
(h) Not cause water quality degradation *(question 13, Attachment A, Minor and Major 20 Questions)*.
The project as proposed will not impact the quantity or quality of surface and/or groundwater at this site. Best Management Practices will be used to prevent any adverse effect to water quality during construction.

Hydraulic Data

Drainage Area – 5.48 sq mi

Q 100 = 358 cfs

Outlet Velocity = 3.76 fps at Q 100

At the 100 year flood, the proposed structure will pass all flow exiting the existing concrete box structure.

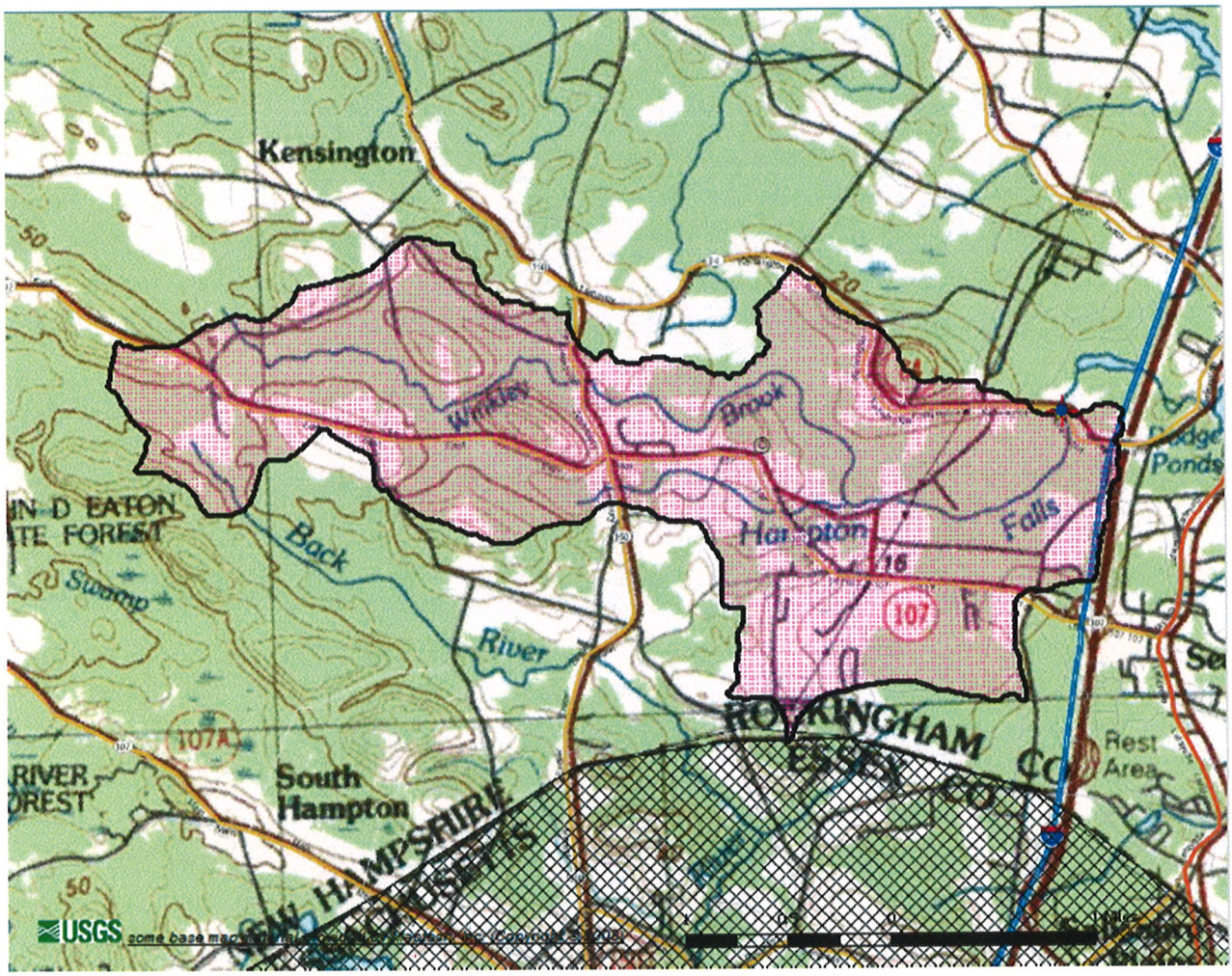


Figure 9: Watershed.

US Army Corps of Engineers®
New England District

New Hampshire Programmatic General Permit (PGP)
Appendix B - Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See PGP, GC 5, regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*		X
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	X	
2.2 Are there proposed impacts to SAS, shellfish beds, special wetlands and vernal pools (see PGP, GC 26 and Appendix A)? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) website, www.nhnaturalheritage.org, specifically the book Natural Community Systems of New Hampshire.		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)	X	
2.5 The overall project site is more than 40 acres.		X
2.6 What is the size of the existing impervious surface area?	1869 ft²	
2.7 What is the size of the proposed impervious surface area?	1869 ft²	
2.8 What is the % of the impervious area (new and existing) to the overall project site?	N/A	
3. Wildlife	Yes	No
3.1 Has the NHB determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require a NHB determination.)		X
3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.		X

3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the PGP, GC 21?	X	
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?	X	
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		N/A
5. Historic/Archaeological Resources		
For a minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) shall be sent to the NH Division of Historical Resources as required on Page 5 of the PGP**		N/A

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.

** If project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law..

PART Env-Wt 404 CRITERIA FOR SHORELINE STABILIZATION

The rehabilitation of the bridge that carries Rte. 84 over Hampton Falls River proposes the placement of stone fill within areas under the jurisdiction of the NH Wetlands Bureau and the US Army Corps of Engineers. The stone fill will be located in the channel and along the bank of the proposed structure as shown on the plans.

Pursuant to PART Wt 404 Criteria for Shoreline Stabilization, the following addresses each codified section of the Administrative Rules:

Wt 404.01 Least Intrusive Method

The riverbank stabilization treatment proposed is the least intrusive construction method necessary to minimize the disruption to the existing shorelines. The stone treatment can be reasonably constructed utilizing general highway construction methods.

Wt 404.02 Diversion of Water

Proposed roadway drainage will allow storm water run-off to be diverted so that it will flow over vegetated areas, insofar as possible, prior to entering Hampton Falls River. This will minimize erosion of the shoreline.

Wt 404.03 Vegetative Stabilization

Natural vegetation will be left undisturbed to the maximum extent possible. The only locations being disturbed are the impacted areas on the plan for construction. All newly developed slopes and disturbed areas will have humus and seed applied for turf establishment, which will help stabilize the project area.

Wt 404.04 Rip-Rap

(a) Stone fill, as proposed, is shown on the attached plans to protect the channel and bank as necessary. Stable embankments are necessary to maintain the structural integrity of the bridge during all flow conditions.

(b) (1-5) The minimum and maximum stone size, the gradation, cross sections of the stone fill, proposed location, and other details have been provided on the attached plans. Bedding for the stone fill will consist of natural ground excavated to the proposed underside of the stone fill with geotextile fabric.

(b) (6) Enclosed are plan sheets to sufficiently indicate the relationship of the project to fixed points of reference, abutting properties, and features of the natural shoreline.

(b) (7) Stone fill is recommended for the limits shown on the attached plans to protect the banks from erosion during flood flows, from scour during all flows, and slopes greater than 2:1 have difficulty supporting vegetation.

(c) This project is not located adjacent to a great pond or water body where the state holds fee simple ownership.

(d) Stone fill is proposed to extend down to and adequately keyed into the channel bottom to prevent possible undermining of the slope.

(e) The enclosed plan has been stamped by a professional engineer.

New Hampshire Natural Heritage Bureau

To: Tony Weatherbee
7 Hazen Drive
Concord, NH 03302

Date: 7/7/2015

From: NH Natural Heritage Bureau

Re: Review by NH Natural Heritage Bureau of request dated 7/7/2015

NHB File ID: NHB15-2269 Applicant: Tony Weatherbee

Location: Tax Map(s)/Lot(s):
Hampton Falls

Project Description: Temporary sandbags will be installed to dewater the work zone. The existing metal pipe will be removed and replaced with a concrete box structure.

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

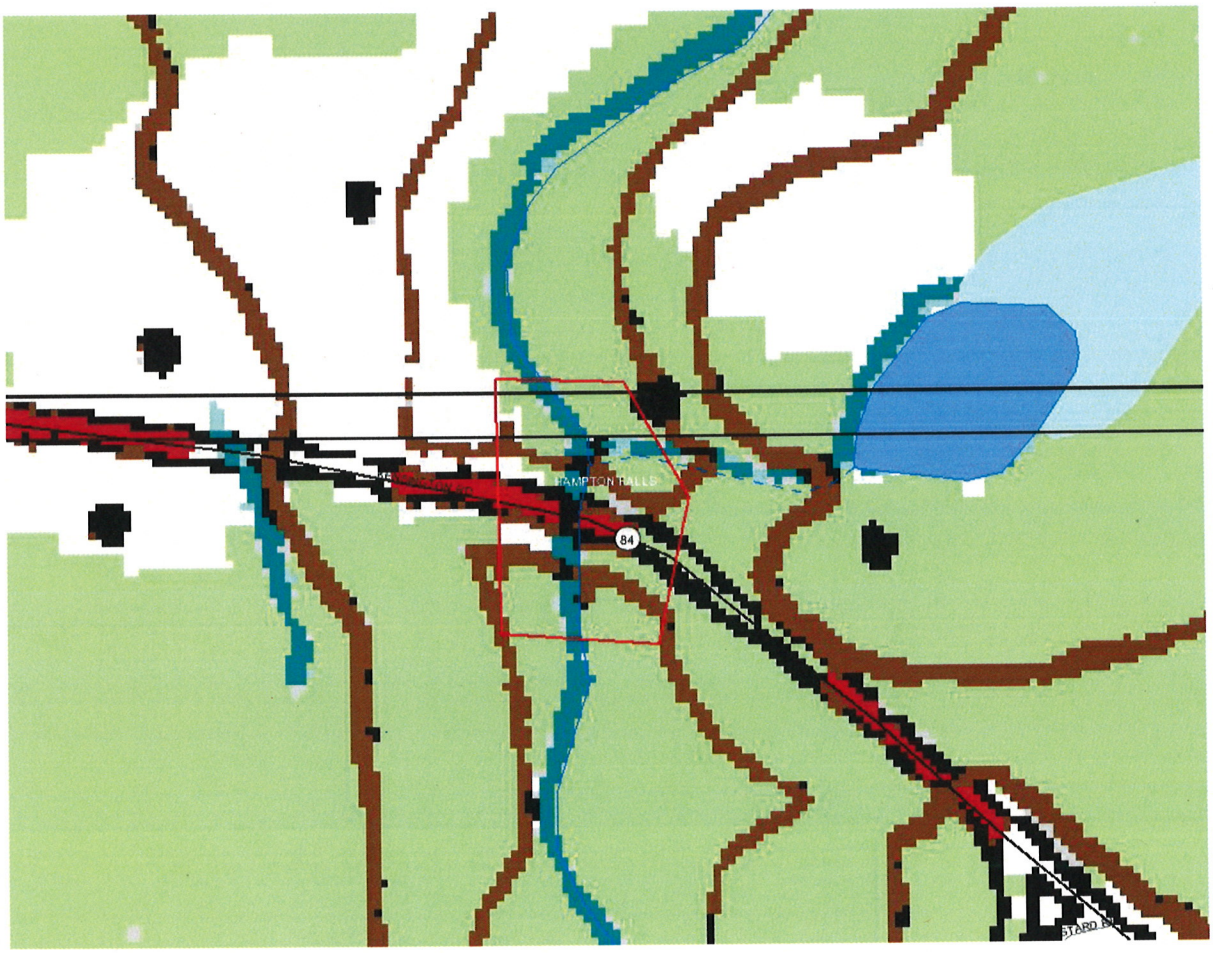
A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

This report is valid through 7/6/2016.

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
172 Pembroke Road
Concord NH 03301

MAP OF PROJECT BOUNDARIES FOR NHB FILE ID: NHB15-2269



Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
172 Pembroke Road
Concord NH 03301

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
PHONE: (603)223-2541 FAX: (603)223-0104
URL: www.fws.gov/newengland

Consultation Code: 05E1NE00-2016-SLI-0709
Event Code: 05E1NE00-2016-E-00923
Project Name: Hampton Falls 162/044

January 07, 2016

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: Hampton Falls 162/044

Official Species List

Provided by:

New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
(603) 223-2541
http://www.fws.gov/newengland

Consultation Code: 05E1NE00-2016-SLI-0709
Event Code: 05E1NE00-2016-E-00923

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Name: Hampton Falls 162/044
Project Description: The location is at the bridge that carries Rte. 84 over The Hampton Falls River. This project will replace the existing metal pipe structure with a concrete box structure. The project will take place from May 2016 to September 2016.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

United States Department of Interior
Fish and Wildlife Service

Project name: Hampton Falls 162/044

Project Location Map:

Project Coordinates: MULTIPOLYGON (((-70.88184177875519 42.90901661988568, -70.8819329738617 42.909924233368194, -70.88307559490202 42.910057820371485, -70.88304877281189 42.90907162714385, -70.88184177875519 42.90901661988568)))

Project Counties: Rockingham, NH

United States Department of Interior
Fish and Wildlife Service

Project name: Hampton Falls 162/044

Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	Status	Has Critical Habitat	Condition(s)
Northern long-eared Bat *(Myotis septentrionalis)*	Threatened		

United States Department of Interior
Fish and Wildlife Service

Project name: Hampton Falls 162/044

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Wetland Application – NHDOT Cultural Resources Review

For the purpose of compliance with regulations of the National Historic Preservation Act, the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800), the US Army Corps of Engineers' *Appendix C*, and/or state regulation RSA 227-C:9, *Directive for Cooperation in the Protection of Historic Resources*, the NHDOT Cultural Resources Program has reviewed the enclosed Standard Dredge and Fill Application for potential impacts to historic properties.

Above Ground Review

Known/approximate age of structure: 1961 Metal Pipe (162/044)

☒ No Potential to Cause Effect/No Concerns

☐ Concerns:

Below Ground Review

Recorded Archaeological site: ☐Yes ☒No

Nearest Recorded Archaeological Site Name & Number: 27-RK-0166
☒Pre-Contact ☐Post-Contact

Distance from Project Area:
3533 ft (1.077 km) east of project area

☒ No Potential to Cause Effect/No Concerns
Although metal pipe pipe (10'3" wide & 6'9" tall)will be replaced with 12 X 8' concrete box, wing walls and riprap, the area looks disturbed by the construction of the road and culvert, associated grading and landscaping, and significant eroded banks. No concerns.

☐ Concerns:

Reviewed by:

Sheila Charles

NHDOT Cultural Resources Staff

1/19/2016

Date:

BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: August 19th 2015
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Matt Urban
Ron Crickard
Mark Hemmerlein
Chris Turgeon
Bob Landry
Bob Juliano
Marc Laurin
Bill Saffian
Jennifer Reczek
Chris Carucci
Rebeca Martin
Stephanie Micucci
Kirk Mudget
Ron Kleiner
Rita Hunt

Federal Highway Administration
Jamie Sikora

Army Corps of Engineers
Michael Hicks

NHDES
Jocelyn Degler
Lori Sommer

NH Fish & Game
Carol Henderson

NH Natural Heritage Bureau
Amy Lamb

CLD
Kristen Rutter
John Byatt

MHT
Richard Fixler
Joan Hagopian
Mike Venti

Jacobs
Sean Tiney

Smart Associates
Jennifer Riordan

SPNHF
Reagan Bissonnette

VHB
Julie Whitmore
Pete Walker

PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:
(minutes on subsequent pages)

(When viewing these minutes online, click on a project to zoom to the minutes for that project)

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Lebanon, 40495, Non-Federal

Tony Weatherbee provided an overview of the project. The scope of the project is to rehab the existing concrete box that carries I-89 over Stony Brook. The existing structure is a concrete box structure with a 17'-0" span. Proposed work consists of repairing concrete delaminations on the structure walls and wingwalls. The project would have been done by PBN however the structure if located in a Tier 3 watershed.

Mike Hicks asked if it was Class A water. T. Weatherbee said that he did not know.

Lori Sommer said that no mitigation would be required.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Washington, 29761, Non-Federal

Tony Weatherbee provided an overview of the project. The scope of the project is to rehab the concrete slab bridge that carries NH Route 31 over Shedd Brook. The existing structure is a concrete slab bridge that has a 10'-0" clear span and a 28'-4" deck width. Proposed work consists of replacing the concrete deck, repairing the concrete substructure and toewall, and placing riprap. The deck will be replaced in two phases. The substructure will be faced with approximately 1' of concrete.

Jocelyn Degler asked what the width will be of the channel that is not to be impacted. T. Weatherbee said that it would be approximately 1' to 2'. Three feet of riprap is proposed in front of each abutment and it is not possible to do less than that because the channel is as narrow as it is. Matt Urban asked if the smaller toewalls that are in front of the larger toe walls could be removed in order to allow for more room. T. Weatherbee said that he thought removing the smaller toewalls was a possibility.

Carol Henderson asked what time of the year this project would take place and Tony said it would take place in the winter of 2016-2017.

Lori Sommer said that no mitigation would be required.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Hampton-Falls, 40502, Non-Federal

Tony Weatherbee provided an overview of the project. The scope of the project is to rehab the metal pipe arch bridge that carries NH Route 84 over Hampton Falls River. The structure is 10'-3" wide and 6'-9" tall. Proposed work consists of replacing the metal pipe with a 12'x8' concrete box, and placing riprap.

T. Weatherbee said that typically a concrete invert would be installed to prolong the life of the structure but in this case the structure is too far degraded. The length of the proposed box will match the existing structure which is approximately 56'.

Lori Sommer asked if the box will be imbedded with natural material and T. Weatherbee said it will be embedded with 1' of natural material.

February 09, 2016

Subject: Hampton Falls 40502 – Mitigation/Pre-App meeting with DES

Attendees:
Matt Urban (NHDOT)
Gino Infascelli (NHDES)
Lori Sommer (NHDES)

Matt Urban introduced the project reminding Gino and Lori that this project had been previously reviewed at the Natural Resource Agency Meeting once before. (Note: It was the August 2015 meeting and Gino was not in attendance).

Using the Plans, photos, and other information in the application Matt described the DOT approach to mitigation for the project.

- Pointed out the rip-rap that would have been installed for the protection of existing infrastructure regardless of the selected alternative. (Therefore not included in calculation of mitigation)
- Pointed out the slight upgrade from an arch pipe to a 12'x 8' box
- Pointed out the inclusion of the wildlife bench (seeking $6,000 in mitigation credits)
- Pointed out where the measurements were taking outside of the area of rip-rap that would have been installed to determine mitigation.
- Pointed out that the project is located within a prime wetland

Lori and Gino were both concerned with the amount of rip-rap proposed.

Lori reviewed the photos to see if credits could be given where existing rip-rap was in place. There did not appear to be much of any existing rip-rap with the exception of a small corner on the North West corner of the existing arch. Lori indicated we would not need to measure the full length of that North West corner for mitigation purposes and that only the new rip-rap would need to be mitigated.

We reviewed the plan together determining where the appropriate measurements for mitigation would need to be measured from. Matt drew them directly on the plan to take back to the office and have measurements developed.

Gino questioned what the simulated channel material consisted of. Noting that rip-rap is not considered simulated channel material.

Gino also noted that the Typical Cross section in the top left corner of the plan was confusing to him. He asked the DOT take a look at that to determine if something is inaccurate and if not perhaps there would be a better way to describe what it is showing.

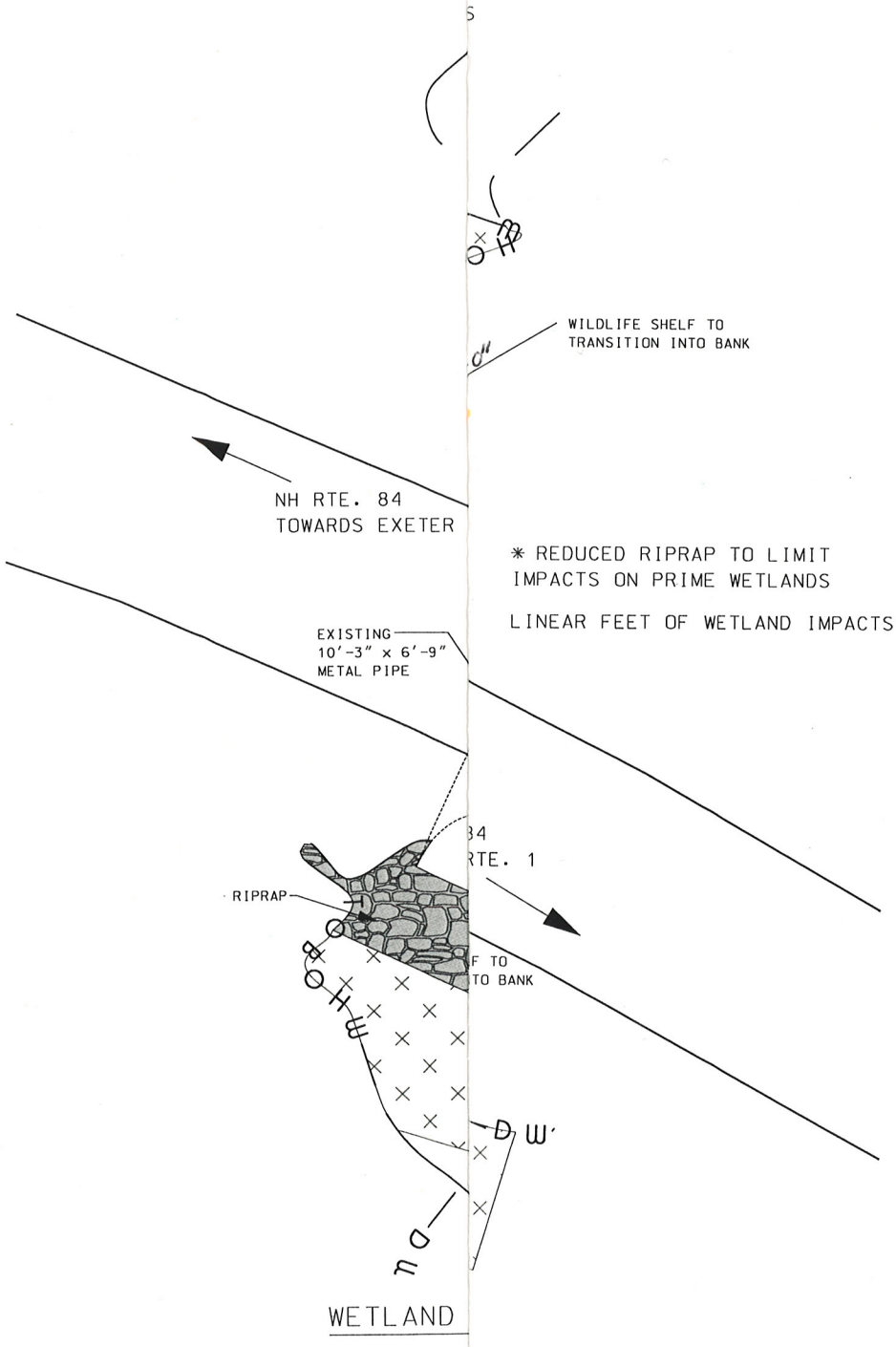
Lori and Gino also indicated that we could not take credit for the wildlife crossing. The inclusion of wildlife passage is an expectation of attempting to comply with the stream crossing rules and therefore is not something that additional credit should be given to.

Lori and Gino asked how the connection between the wildlife bench and the river banks would be connected to ensure there was no gap making the bench obsolete.

Gino also asked that we include the prime wetland lines and possibly the prime wetland buffer lines if the overlap is not overly confusing. If the buffers look weird on the plan Matt indicated he would ask to have a noted added to the plan to indicate the entire work area was within the buffer zone. Matt also indicated he would complete a DES file review of the DES Prime Wetland Files to get the most accurate lines for this area.

DES AQUATIC RESOURCE MITIGATION FUND
STREAM PAYMENT CALCULATION

INSERT LINEAR FEET OF IMPACT on BOTH BANKS AND CHANNEL	**Right Bank**	30.00
	Left Bank	13.0000
	Channel	12.0000
	TOTAL IMPACT	55.0000
	Stream Impact Cost:	$11,000.00
	DES Administrative cost:	
		$2,200.00
********* **TOTAL ARM FUND STREAM PAYMENT********		
		$13,200.00



* REDUCED RIPRAP TO LIMIT
IMPACTS ON PRIME WETLANDS

LINEAR FEET OF WETLAND IMPACTS: 55'-0"

* FOR MITIGATION
CALCULATIONS.

10 0 10 20
SCALE IN FEET

STATE OF NEW HAMPSHIRE
PARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE

MPTON FALLS	BRIDGE NO. 162/044	STATE PROJECT 40502	
RTE. 84 OVER HAMPTON FALLS RIVER			

WETLAND IMPACTS

BRIDGE SHEET 1 OF 1

	BY	DATE		BY	DATE
DESIGNED	ANW	2/18/16	CHECKED		
DRAWN	ANW	2/18/16	CHECKED		
QUANTITIES			CHECKED		

ISSUE DATE		FISCAL YEAR	CREW	SHEET NO.	TOTAL SHEETS
REV. DATE		2016	06	1	1

FILE NUMBER
HAMPTON FALLS
162/044

Figure 5: Upstream of structure (8/2015).

Figure 6: Riverbed (6/2010).

Figure 1: Rte. 84 looking east towards Rte. 1 over the existing metal pipe (8/2015).

Figure 2: Rte. 84 looking west towards Rte. 150 over the existing metal pipe (8/2015).

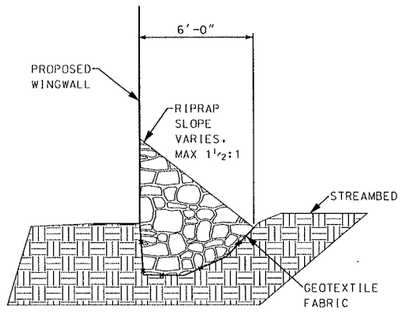
Figure 7: Structure outlet (8/2015).

Figure 8: Structure outlet (8/2015).

Figure 3: Structure inlet (8/2015).

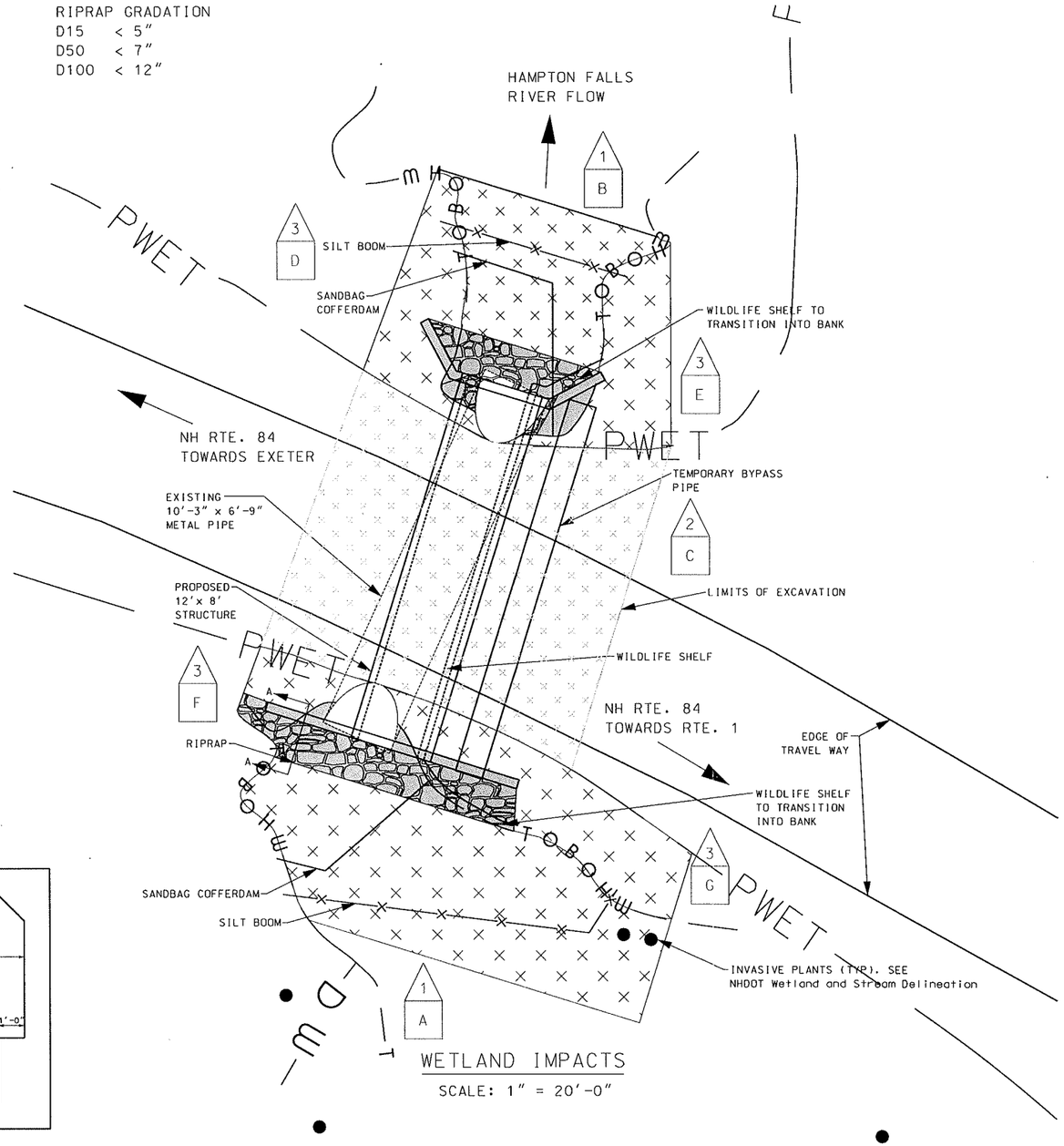
Figure 4: Structure inlet (8/2015).

RIPRAP GRADATION
D15 < 5"
D50 < 7"
D100 < 12"



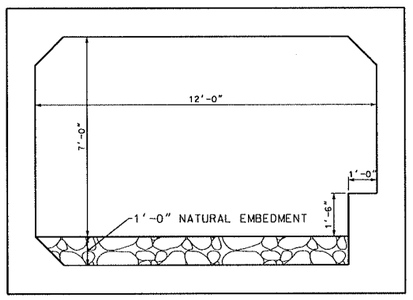
CROSS SECTION A-A

NOT TO SCALE



WETLAND IMPACTS

SCALE: 1" = 20'-0"



TYPICAL BOX SECTION

SCALE: 3/16" = 1'-0"

10 0 10 20

SCALE IN FEET

THE STATE OF NEW HAMPSHIRE
STEVE W. JOHNSON No. 7395 LICENSED PROFESSIONAL ENGINEER
2/24/16

N

WETLAND IMPACT SUMMARY					
WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	AREA		
			PERMANENT IMPACTS		TEMPORARY IMPACTS SF
			N.H.W.B. (NON-WETLAND) SF	N.H.W.B. & A.C.O.E. (WETLAND) SF	
1	R2UB2H	A		174	1160
1	R2UB2H	B		165	489
2	PRIME WETLAND BUFFER ZONE	C			1955
3	PRIME WETLAND	D	23		278
3	PRIME WETLAND	E	1		308
3	PRIME WETLAND	F	24		95
3	PRIME WETLAND	G	89		429

PERMANENT IMPACTS: 476 SF
TEMPORARY IMPACTS: 4714 SF

TOTAL IMPACTS: 5190 SF

WETLAND CLASSIFICATION CODES	
R2UB2H	RIVERINE, LOWER PERENNIAL, UNCONSOLIDATED BOTTOM, SAND, PERMANENTLY FLOODED
PF05E	PALUSTRINE, FORESTED, DEAD, SEASONALLY FLOODED/SATURATED
BANK	

LEGEND

TYPE OF WETLAND IMPACT	SHADING/ HATCHING
TEMPORARY IMPACTS WITHIN THE WETLAND BUFFER ZONE	
NEW HAMPSHIRE WETLANDS BUREAU (PERMANENT NON-WETLAND)	
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	
TEMPORARY IMPACTS	

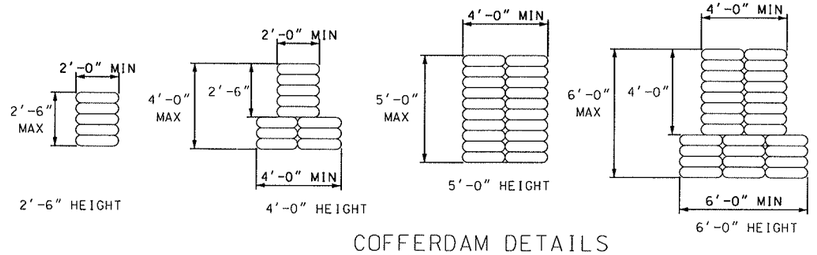
WETLAND DESIGNATION NUMBER

WETLAND IMPACT LOCATION

WETLAND MITIGATION AREA

MITIGATION

● INVASIVE SPECIES. SEE FB SUMMARY REPORT



COFFERDAM DETAILS

NOT TO SCALE

WETLANDS DELINEATED BY FB ENVIRONMENTAL ON 11/2013

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE

TOWN HAMPTON FALLS BRIDGE NO. 162/044 STATE PROJECT 40502

LOCATION NH RTE. 84 OVER HAMPTON FALLS RIVER

WETLAND IMPACTS

BRIDGE SHEET 1 OF 1

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
			DESIGNED	ANW	2/18/16
			DRAWN	ANW	2/18/16
			QUANTITIES		
			ISSUE DATE		
			REV. DATE		

CHECKED		
CHECKED		
CHECKED		

FISCAL YEAR	CREW	SHEET NO.
2016	06	1

FILE NUMBER HAMPTON FALLS 162/044

TOTAL SHEETS 1

SHEET SCALE AS NOTED